UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
	10/675,449	ANDREWS, RYAN N.
Office Action Summary	Examiner	Art Unit	
	Bijendra K. Shrestha	3691	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 October 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,3-11 and 16-25</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,3-11 and 16-25</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Claims 1-20 are presented for examination. Applicant filed an amendment on 10/29/2007 amending claims 1, 3-4, 7-11, 16-17 and 20 canceling claims 2 and 12-15 and adding new claims 21-25. After careful consideration of applicant's arguments and amendments, new grounds of rejections of claims necessitated by Applicant's amendment are established in the instant application as set forth in detail below. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

Applicant is respectfully requested to submit terminal disclaimer for double patenting rejection of the instant application over copending application 11/415,845. The Examiner notes that amended claims of instant application and the amended claims of copending application '845 though not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s).

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 3-11 and 16-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reuter et al., U.S. Pub No. 2002/0049666 (reference A in attached PTO-892) in view of Mott, U.S. Patent No. 7,161,907 (reference B in attached PTO-892) further in view of Zornack, U.S. Patent No. 6,731,680 (reference C in attached PTO-892).

3.   A method for maximizing the distribution of market information in an electronic trading environment, the method comprising:

determining a bandwidth allocation for a communication link that is used in distributing market information related to a tradable object from an electronic market (see paragraph [0011]);

selecting a first mode of transmission from a plurality of modes of transmission for distributing the market information, wherein the first mode of transmission comprises sending a new market update message from the electronic market when a change in a market order book is detected (see paragraph [0005]); and

the second mode of transmission comprises sending a new market information snapshot at predetermined time intervals, wherein the market information snapshot comprises a best bid price and a best ask price currently available for the tradable object (see paragraph [0013]; where indicative data provides snapshot market information), such that the bandwidth used to distribute the market information by the selected mode of transmission comports with the determined bandwidth and maximizes

the distribution of the market information (see paragraph [0011]).

Reuter et al. do not teach determining the bandwidth limit for the communication link and determine whether the limit has been reached.

Mott teaches determining bandwidth limit for the communication link and determine whether the limit has been reached (Mott; Fig. 3A-3C; column 2, lines 5-24; column 6, lines 32-48)

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add the determining bandwidth limit for the communication link and determine whether the limit has been reached of Reuter et al. because Mott teaches incorporating above features enables effective transfer of information and flow control allows the rate of data transfer to be adjusted in order to prevent the slower devices from losing information (Mott, column 1, lines 10-18).

Reuter et al. do not teach dynamically selecting a second mode of transmission for distributing the market information from the plurality of modes of transmission.

Zornack teaches dynamically selecting a second mode of transmission for distributing the market information from the plurality of modes of transmission (Taylor; abstract).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add dynamically selecting a second mode of transmission for distributing the market information from the plurality of modes of transmission of Reuter et al. because Zornack teaches incorporating above features enable to provide

automatically optimum transmission path by using information stored(Zornack, column

3, lines 1-3)

4.   As per claim 3, Reuter et al. in view of Mott further in view of Zornack teach claim

1 as described above. Reuter et al. further teach the method of optimizing bandwidth

allocation in logically separate communication channel to exchange different types of

data (see paragraph [0011]).

Reuter et al. do not teach determining that a bandwidth over the communication

link is below the bandwidth limit; and dynamically selecting the first mode of

transmission.

Zornack teaches determining that a bandwidth over the communication link is

below the bandwidth limit; and dynamically selecting the first mode of transmission

(Zornack, Fig. 3A, steps 120-150; column 2, lines 35-40).

Therefore, it would be obvious to one of ordinary skill in the art at the time the

invention was made to add determining that a bandwidth over the communication link is

below the bandwidth limit and dynamically selecting the first mode of transmission of

Reuter et al. because Zornack teaches incorporating above features enable to provide

automatically optimum transmission path by using information stored(Zornack, column

3, lines 1-3).

5.   As per claim 4, Reuter et al. in view of Mott further in view of Zornack teach claim

1 as described above. Reuter et al. further teach the method wherein

the communication link comprises a network connection from the market

information source to a gateway (see Fig. 1, paragraph [0015], [0016] and [0035]).

6.   As per claim 5, Reuter et al. in view of Mott further in view of Zornack teach claim 1 as described above. Reuter et al. further teach the method wherein

the communication link comprises a network connection from an electronic market information source to a client device (see Fig. 1; paragraph [0016]).

7.   As per claim 6, Reuter et al. in view of Mott further in view of Zornack teach claim 1 as described above. Reuter et al. further teach the method wherein

the communication link comprises a network connection from a gateway to a client device (see Fig. 1; cohost server(107) which acts as gateway to client devices 104-106).

8.   As per claim 7, Reuter et al. in view of Mott further in view of Zornack teach claim 1 as described above. Reuter et al. further teach the method wherein

determining bandwidth limit for a communication link comprises manually setting a bandwidth limit (see paragraph [0011] and [0017]; the Examiner interprets bandwidth allocation include manual setting of bandwidth limit by its usage).

9.   As per claim 8, Reuter et al. in view of Mott further in view of Zornack teach claim 1 as described above.

Reuter et al. do not teach the method wherein determining bandwidth limit for a communication link comprises measuring the bandwidth limit electronically by software.

Mott teaches the method wherein determining bandwidth limit for a communication link comprises measuring the bandwidth electronically by software (see column 3, lines 23-28; column 6, lines 36-38).

Therefore, it would be prima facie obvious to one of ordinary skill in the art at the time the invention was made to add the method wherein determining bandwidth for a communication link comprises measuring the bandwidth electronically by software of Reuter et al. because Mott teaches incorporating above features enables to flow control and provide basic mechanism for effective transfer of data and other information (Mott, column 1, lines 10-11).

10.   As per claim 9, 10 and 11 Reuter et al. in view of Mott further in view of Zornack teach claim 1 as described above.

Reuter et al. <u>do not teach that the mode of transmission is dynamically changed from a first mode to a second mode when the second mode maximizes the distribution of the market information more than the first mode and vice versa, and .</u>
<u>aspects of the mode of transmission may be dynamically adjusted to comport with changing bandwidth limits</u>.

Zornack teaches the mode of transmission is dynamically changed from a first mode to a second mode when the second mode maximizes the distribution of the market information more than the first mode and vice versa, and aspects of the mode of transmission may be dynamically adjusted to comport with changing bandwidth limits (Zornack, Fig. 3A/3B, column 1, lines 45-65)

Therefore, it would be prima facie obvious to one of ordinary skill in the art at the time the invention was made to add the method wherein mode of transmission is dynamically changed from a first mode to a second mode when the second mode maximizes the distribution of the market information more than the first mode and vice

versa, and aspects of the mode of transmission may be dynamically adjusted to comport with changing bandwidth limits of Reuter et al. because Zornack teaches incorporating above features enable to provide optimum transmission path automatically by using information already stored(Zornack, column 3, lines 1-3).

11.   As per claim 16, Reuter et al teach a system for maximizing the distribution of market information related to a tradable object in an electronic trading environment (see Fig. 1; paragraph [0011] and [0012]).

Reuter et al. further teach a first mode of transmission comprises sending a new market update message from the electronic market when a change in a market order book is detected (see paragraph [0005]) and a second mode of transmission comprises sending a new market information snapshot comprising a best bid price and a best ask price available for the tradable object (see paragraph [0013]; where indicative data provides snapshot market information), such that the bandwidth used to distribute the market information by the selected mode of transmission comports with the determined bandwidth and maximizes the distribution of the market information (see paragraph [0011]).

Reuter et al. <u>do not teach a bandwidth monitor for determining bandwidth for a communication link that is used in distributing market information from an electronic market;</u>

Mott teaches a bandwidth monitor for determining bandwidth for a

communication link that is used in distributing market information from an electronic

market (see Fig 2, Switch Element (200); column 6, lines 58-66).

Therefore, it would be obvious to one of ordinary skill in the art at the time the

invention was made to add teach a bandwidth monitor for determining bandwidth for a

communication link that is used in distributing market information from an electronic

market of Reuter et al. because Mott teaches incorporating above features enables to

flow control and provide basic mechanism for effective transfer of data and other

information (Mott, column 1, lines 10-11).

Reuter et al. do not teach a market information interface for dynamically selecting

a mode of transmission for distributing the market information from a plurality of modes

of transmission, the market information interface further for dynamically selecting the

first mode of transmission when the bandwidth for the communication link is below a

bandwidth limit; and the market information interface further for dynamically selecting

the second mode of transmission when the bandwidth for the communication link is

above the bandwidth limit.

Zornack teaches a market information interface for dynamically selecting a mode

of transmission for distributing the market information from a plurality of modes of

transmission, the market information interface further for dynamically selecting the first

mode of transmission when the bandwidth for the communication link is below a

bandwidth limit; and the market information interface further for dynamically selecting

the second mode of transmission when the bandwidth for the communication link is

above the bandwidth limit (Zornack, Fig. 1 and 3A/3B; column 1, lines 45-65; column 2, lines 35-50).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add a market information interface for dynamically selecting a mode of transmission for distributing the market information from a plurality of modes of transmission, the market information interface further for dynamically selecting the first mode of transmission when the bandwidth for the communication link is below a bandwidth limit; and the market information interface further for dynamically selecting the second mode of transmission when the bandwidth for the communication link is above the bandwidth limit of Reuter et al. because Zornack teaches incorporating above features enables to provide optimum transmission path automatically by using information already stored(Zornack, column 3, lines 1-3).

12.   As per claim 17 and 19, Reuter et al. in view of Mott further in view of Zornack teach claim 16 as described above. Reuter et al. <u>do not teach system wherein the bandwidth monitor receives a bandwidth limit signal indicating the bandwidth limit for the communication link; and the bandwidth limit is dynamically adjusted according to current bandwidth consumption on the communication link</u>.

Mott teaches that the system wherein the bandwidth monitor receives a bandwidth limit signal indicating the maximum allowable bandwidth for the communication link (see Fig. 1; column 6, lines 32-38); the bandwidth limit is dynamically adjusted according to current bandwidth consumption on the communication link (see column 6, lines 38-48).

Therefore, it would be prima facie obvious to one of ordinary skill in the art at the time the invention was made to add system wherein the bandwidth monitor receives a bandwidth limit signal indicating the maximum allowable bandwidth for the communication link; and the bandwidth limit is dynamically adjusted according to current bandwidth consumption on the communication link of Reuter et al. because Mott teaches incorporating above features enables to flow control and provide basic mechanism for effective transfer of data and other information (Mott, column 1, lines 10-11).

13.   As per claim 18, Reuter et al. in view of Mott further in view of Zornack teach claim 17 as described above. Reuter et al. further teach the system wherein

the bandwidth limit is manually set (see paragraph [0011] and [0017]; the Examiner interprets bandwidth allocation include manual setting of bandwidth limit by its usage).

14.   As per claim 20, Reuter et al. in view of Mott further in view of Zornack teach claim 16 as described above. Reuter et al. further teach the system wherein

a market information storage buffer for buffering market information before being distributed according to the selected mode of transmission on the communication link (see Fig. 1; paragraph [0016] and [0017]).

15.   As per claim 21, Reuter et al. in view of Mott further in view of Zornack teach claim 16 as described above. Claim 21 is rejected under same rational as claim 4 described above.

16.   As per claim 22, Reuter et al. in view of Mott further in view of Zornack teach claim 16 as described above. Claim 22 is rejected under same rational as claim 5 described above.

17.   As per claim 23, Reuter et al. in view of Mott further in view of Zornack teach claim 16 as described above. Claim 23 is rejected under same rational as claim 6 described above.

18.   As per claim 24, Reuter et al. in view of Mott further in view of Zornack teach claim 16 as described above. Claim 24 is rejected under same rational as claim 7 described above.

19.   As per claim 25, Reuter et al. in view of Mott further in view of Zornack teach claim 16 as described above. Claim 25 is rejected under same rational as claim 8 described above.

Response to Argument

20.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection. Accordingly. This office action is made **Non-Final**.

Conclusion

21.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosures. The following are pertinent to current invention, though not relied upon:

Chawla et al. (U.S. Patent No. 6,876,668) teach apparatus and method for dynamic bandwidth allocation.

Cao et al. (U.S. Patent No. 6,785,291) teach apparatus and method for channel assignment of packet flows.

Choudhary et al. (U.S. Pub No. 5,541,912) teach dynamic queue length thresholds in a shared memory ATM switch.

Dutta (U.S. Patent No. 6,130,887) teaches methods of dynamically switching return channel transmissions.

Goguen et al. (U.S. Patent No. 6,665,273) teach dynamically adjusting multiprotocal label switching (MPLS) traffic engineering tunnel bandwidth.

Khan et al. (U.S. Patent No. 6,400,954) teach methods and systems for mode selection based on access network capacity.

Lopez et al. (U.S. Patent No. 7,274,664) teach multi-channel communication system and method base on class of service requirements.

Sherman (U.S. Patent No. 5,978,387) teaches dynamic allocation of data transmission resources.

Sriram (U.S. Patent No. 5,463,620) teaches bandwidth allocation, transmission scheduling, and congestion avoidance in broadband asynchronous transfer mode networks.

Taylor (U.S. Pub No. 2003/0214966) teaches method of maximizing use of bandwidth for communicating with mobile platform.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bijendra K. Shrestha whose telephone number is (571)270-1374. The examiner can normally be reached on 7:00 AM-4:30 PM (Monday-Friday); 2nd Friday OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached on (571)272-6771. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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PRIMARY EXAMINER